

Report on a Talk on the Classification of Finite Simple Groups in March of 2025 in Cambridge

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The programme *Modern History of Mathematics* (MHM) was hosted by the Isaac Newton Institute over a period of four months. A significant proportion of the programme was dedicated to research in the development of 20th-century algebra, specifically the project of reconstructing the *Classification of Finite Simple Groups* (CFSG). In early March, an invitation was extended to me to deliver a presentation on this subject. The focus of my master's thesis was the establishment of a network of mathematicians in this Classification of Finite Simple Groups, a process that spanned nearly three decades.

The thesis was part of the DFG-funded project *Big Mathematics? The Classification of Finite Simple Groups, 1950s to 1980*, a collaborative effort between Prof. Dr. Volker Remmert and Prof. Dr. Rebecca Waldecker, who also oversaw the organisation of the three-day workshop at which I presented. At the time, I was employed as a student assistant on the project. When Professors Remmert and Waldecker invited me to speak in Cambridge, I gladly accepted the invitation.

As a constituent element of a broader research initiative, the focus of my master's thesis was on the twenty core mathematicians who were at the core of the mathematical classification project. Over the course of several months, I collected data on the communication between these twenty individuals, both in official (e.g. collaboration, publication) and private (e.g. exchange of letters, information from interviews) contexts. In the course of the presentation, I presented my findings, which had been divided into multiple networks based on the different sources of the data that had been collected and analysed.

The Network

- 99 nodes (incl. The 20 key players)
- 633 edges
- 31 connections on average to other people & institutions
- Best connected individuals also crucial in self-historicization

INI Seminar Room 1

Screenshot of the livestream of my talk, showing the complete network I reconstructed for my Masters Thesis

At this juncture, my thesis had already been completed, thus enabling the presentation of the total findings to the workshop members.

This also represented a significant opportunity for me. I had previously submitted an application and been accepted into the Graduate School: *Transformation of Science and Technology*, with a dissertation project on the History of Mathematics in the Cold War US. Consequently, the opportunity to engage with experts in the field of History of Mathematics and to present the findings of my thesis would be of immense benefit to my future research endeavours.

The post-presentation discussion contributed to a more comprehensive understanding of the intricacies and methodologies of the discipline. Due to the absence of a formal mathematical education, the project I assisted in and my master's thesis constituted the inaugural foray into this historical discipline. The workshop I partook in, in turn, served to affirm my choice of dissertation project. The workshop also provided a valuable opportunity to attend the other talks and to participate in the general discussions. A social gathering was organised on the evening of my presentation, which provided an opportunity for networking with the other historians of mathematics in attendance. Through personal interaction with a number of individuals, I was able to gain insight into the projects they are currently engaged in, as well as the methodologies they employ. This has significantly enriched my understanding of the subject matter and has been instrumental in enhancing my professional expertise.

It is noteworthy that, more than half a year later, the work of one of the other presenters has become highly relevant and important for my research. I was able to reconnect with this individual with relative ease. The completion of this endeavour would not have been feasible without the invaluable support of the ICHM and their Travel Grant, for which I express my profound gratitude.